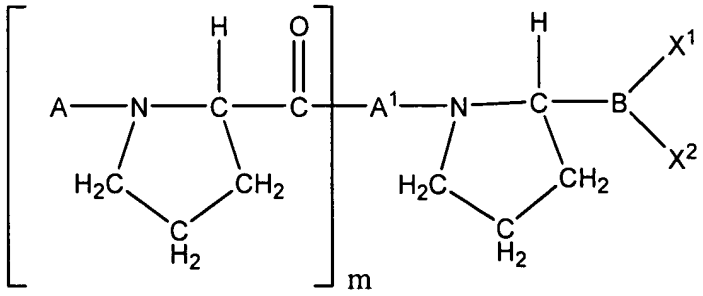
Amendments to the Claims

This following Listing of the Claims replaces all prior versions, and listings, of claims in the application:

Listing of Claims:

1-28. (Canceled)

29. (New) A compound having the structure



wherein m is an integer between 1 and 10, inclusive; A and A^1 are L-amino acid residues such that the A in each repeating bracketed unit can be a different amino acid residue; the C bonded to B is in the L-configuration; the bonds between A and N, A^1 and C, and between A^1 and N are peptide bonds; and each X^1 and X^2 is, independently, a hydroxyl group or a group capable of being hydrolyzed to a hydroxyl group at physiological pH.

30. (New) The compound of claim 29, wherein A and A^1 are independently L-proline or L-alanine residues.

31. (New) The compound of claim 29, wherein m is 1 or 2.

32. (New) The compound of claim 29, wherein X^1 and X^2 are hydroxyl groups.

33. (New) The compound of claim 29, wherein the compound has a binding or dissociation constant to DP-IV of at least 10^{-9} M, 10^{-8} M, or 10^{-7} M.

34. (New) The compound of claim 29, further comprising a pharmaceutically acceptable carrier or diluent.

35. (New) A compound having the structure:

$$[Z - Ala]_p - X - Pro - Y - boroPro$$

wherein each Y, X, and Z, independently, is any amino acid, and

wherein p is 0, 1, or more than 1.

36. (New) The compound of claim 35, wherein Z is proline.

37. (New) The compound of claim 35, wherein p is 1.

38. (New) A compound having the structure:

$$[Z - Pro]_p - X - Pro - Y - boroPro$$

wherein each Y, X, and Z, independently, is any amino acid, and

wherein p is 0, 1, or more than 1.

39. (New) The compound of claim 38, wherein Z is proline.

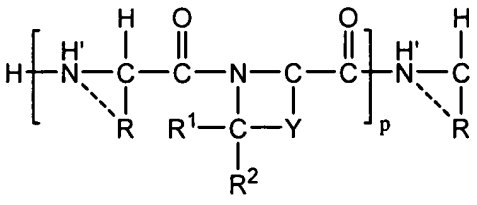
40. (New) The compound of claim 38, wherein p is 0-3.

41. (New) The compound of claim 38, wherein p is 1.

42. (New) A compound having the structure:

Group I – Group II

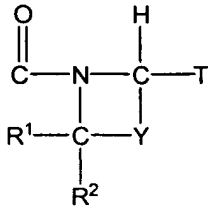
wherein Group I is



wherein H represents a hydrogen; C represents a carbon; O represents an oxygen; N represents a nitrogen; each R, independently, is chosen from the group consisting of the R groups of an amino acid; each broken line, independently represents a bond to an H or a bond to one R group, and each H' represents that bond or a hydrogen; p is an integer between 0 and 4 inclusive;

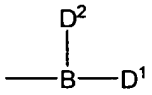
and Group II is selected from the group consisting of

(i)



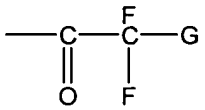
wherein T is selected from a group consisting of a group of the formula

(1)



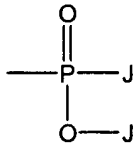
wherein each D^1 and D^2 independently is a hydroxyl group or a group which is capable of being hydrolysed to a hydroxyl group in aqueous solution at physiological pH;

(2) a group of the formula

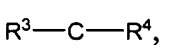
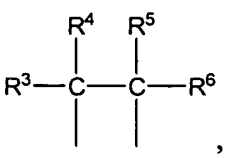
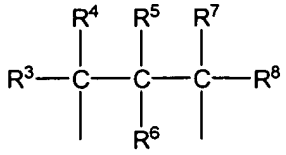


wherein G is either H, fluorine (F) or an alkyl group containing 1 to 20 carbon atoms and optional heteroatoms which can be N, S (sulfur) or O; and

(3) a phosphonate group of the formula



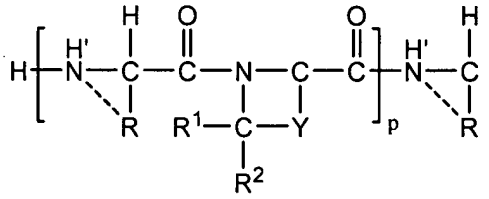
wherein each J, independently is O-alkyl, N-alkyl or alkyl comprising 1-20 carbon atoms and optionally heteroatoms which can be N, S or O; and

Y is  ,  , or 

wherein each R^1, R^2, R^3, R^4, R^5, R^6, R^7, and R^8 separately is a group which does not significantly interfere with site specific recognition of the inhibitory compound by DP-IV and allows a complex to be formed with DP-IV.

43. (New) A compound of claim 42, wherein Group I is

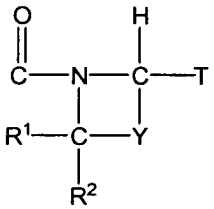
(1)



wherein H represents a hydrogen; C represents a carbon; O represents an oxygen; N represents a nitrogen; each R, independently, is chosen from the group consisting of the R groups of an amino acid; each broken line, independently represents a bond to an H or a bond to one R group, and each H' represents that bond or a hydrogen; p is an integer between 0 and 4 inclusive;

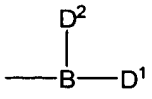
and Group II is

(i)



wherein T is

(1)



wherein each D^1 and D^2 independently is a hydroxyl group or a group which is capable of being hydrolysed to a hydroxyl group in aqueous solution at physiological pH; and

Y is $R^3—C—R^4$,

wherein each R^1, R^2, R^3, and R^4 separately is a group which does not significantly interfere with site specific recognition of the inhibitory compound by DP-IV and allows a complex to be formed with DP-IV.

44. A method for inhibiting DP-IV activity in a mammal comprising administering to a mammal in need thereof an effective amount of the compound of claim 29, 35, 38, or 42.